

Order of Operations

How many different ways can you evaluate this expression?

$$9 \times 6 + 36 \div 4 - 1 =$$

Can also be written as:

$$9(6) + \frac{36}{4} - 1 =$$

Order of Operations

To ensure everyone gets the same value,
use the order of operations.

Recall the order of operations with whole numbers.

- Do the operations in brackets first.
- Multiply and divide, in order, from left to right.
- Add and subtract, in order, from left to right.

The same order of operations applies to all integers.

Now let's go back


Example 1

Evaluate: $[(-6) + (-2)] \div (-4) + (-5)$

A Solution

$$[(-6) + (-2)] \div (-4) + (-5)$$

Do the operation in square brackets first.


$$= (-8) \div (-4) + (-5)$$

Divide.

$$= (+2) + (-5)$$

Add.

$$= -3$$

Example 2

Evaluate: $\frac{2 + 4 \times (-8)}{-6}$

A Solution

$$\frac{2 + 4 \times (-8)}{-6}$$

$$= \frac{2 + (-32)}{-6}$$

$$= \frac{-30}{-6}$$

$$= 5$$

Evaluate the numerator.

Multiply.

Add.

Divide.

If an integer does not have a sign, it is assumed to be positive; for example, $2 = +2$. Then we do not need to put the number in brackets.

Example 3

Evaluate: $\frac{[18 - (-6)] \times (-2)}{3(-4)}$

A Solution

$\frac{[18 - (-6)] \times (-2)}{3(-4)}$ Evaluate the numerator and denominator separately.
Do the square brackets first.

$= \frac{24 \times (-2)}{3(-4)}$ Multiply.

$= \frac{-48}{-12}$ Divide.

$= 4$

Let's Try Some!



Make sure that you check your answers as you go.

**If you get it wrong, figure out what you did before
you do the next question.**

Attachments

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